

Installation of ElectroFlow™ Active Harmonic Filtering System at Pohai Nani Retirement Community has achieved the following impressive results:

- Sustained reduction of kWh consumption and kW demand by approx 14.9%
- Balanced all three phases within 4%, whereas prior imbalances were frequently measured up to 25%
- Power factor improved from an average of 0.70 to an average of 0.98, with power factor of unity (1.00) achieved three out the six months of ElectroFlow™ operation
- Reduced system harmonics by 80% on all three phases, recycling this destructive energy into usable power for the facility
- Reduced frequency of fluorescent bulb burn-outs and ballast failures by over 80%
- Improved audio and visual signal quality throughout the facility (including surveillance cameras)

Installation of ElectroFlow™ Active Harmonic Filtering System at Pohai Nani Retirement Community has achieved the following impressive results:

- Reduced continuously-operating motor temperatures by 19 °F nominally facility-wide
- Reduced main transformer oil temperature by 39 °F
- Equipment is modular and stackable, allowing for future changes to facility configuration
- Connects in parallel, allowing for isolation from the facility's system and installation without need for shutdown
- Equipment has a nominal design life of 20 years
- Initial facility audit at the main transformer is performed at no-cost to the customer (typically 2 hours on-site), with all data given to the customer
- Installations typically pay-back in three years or less on energy savings

Reduced trouble calls due to elevator lock-ups from an average of 3 per month to 2 lock-ups over six months (through January 2005)

Schindler Customer Score Card - Tabbed display

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BUILDING PARTICULARS

Address

POHAI NANI
45-090 NAMOKU ST
Kaneohe, HI 96744-5312

Building ID

S186045-01

[Service Request](#)



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Score Card

Call History

Equipment

Contacts

Site History

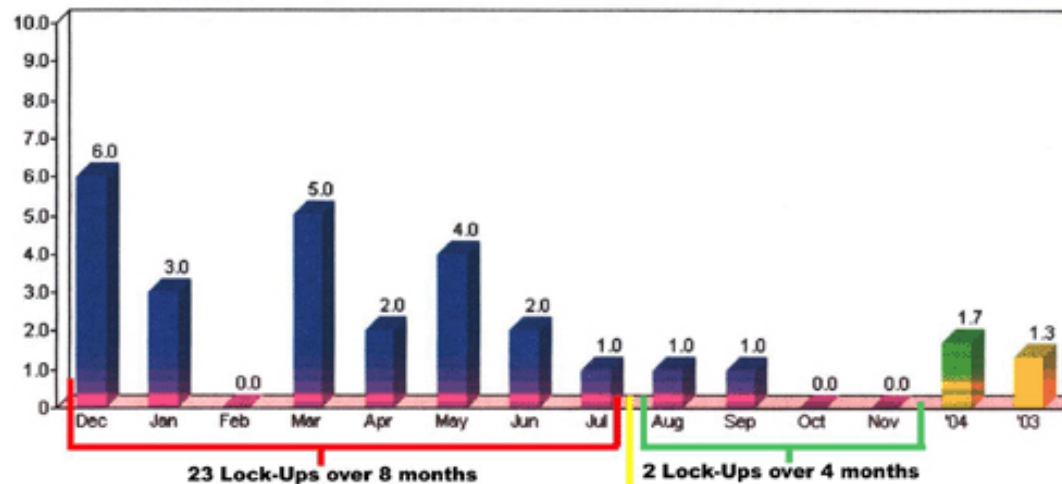
Callbacks

Mean Time between Callbacks

Problem Determination

[Show Pie Chart >>](#)

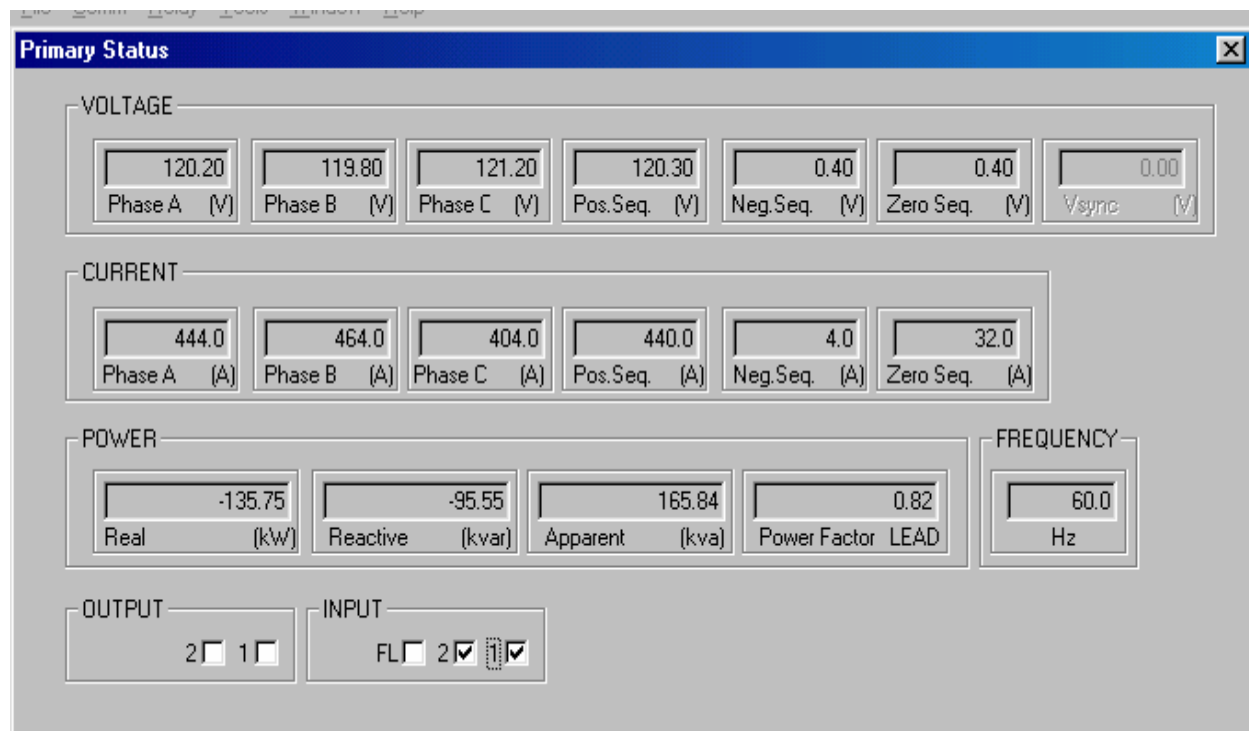
Callbacks for Past 12 Months. '04 is Avg YTD and '03 is AVG 2003



ElectroFlow Installation Completed
1 August 2004

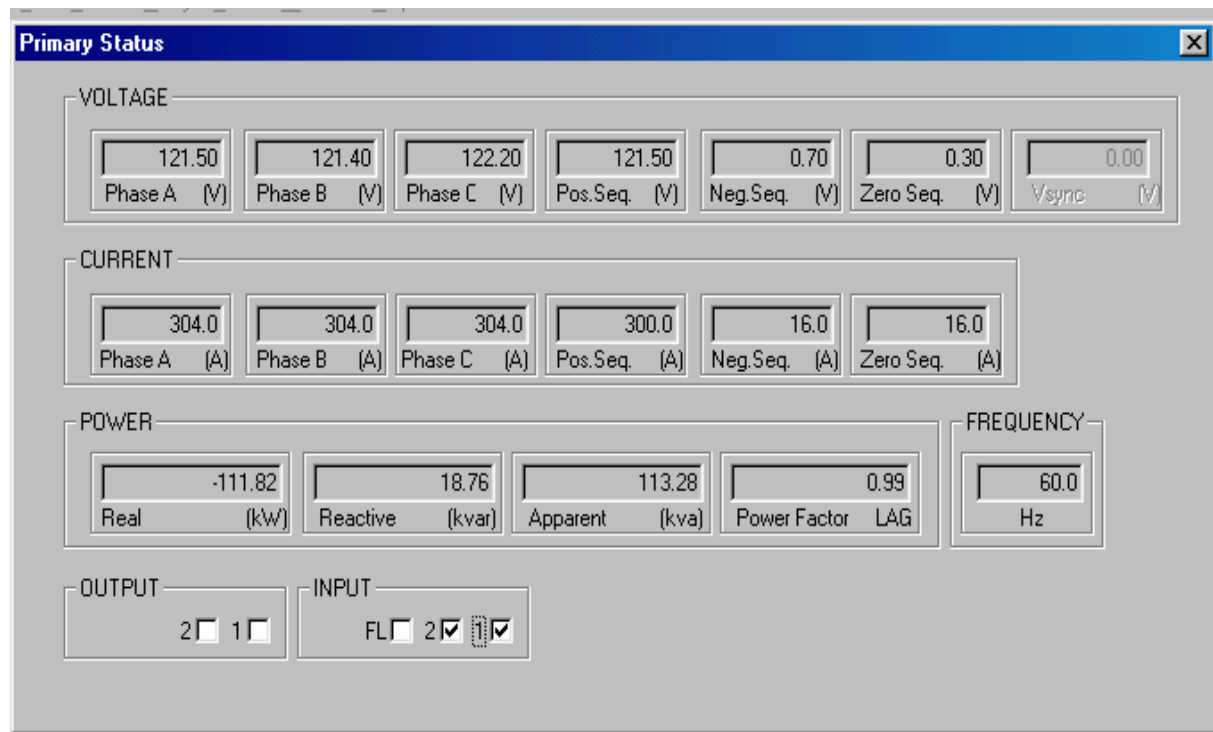
The HECO-required interconnect relay (Beckwith 3410-A) recorded the following conditions with the ElectroFlow™ equipment turned **OFF**.

- current imbalance of over 13% across the phases (444-A, 464-B, 404-C)
- 135.75 kW demand, drawing 95.55 kVARs from the grid
- power factor of 0.82 (lagging)
- measurements taken at 3:16 pm, Thursday 3 February 2005

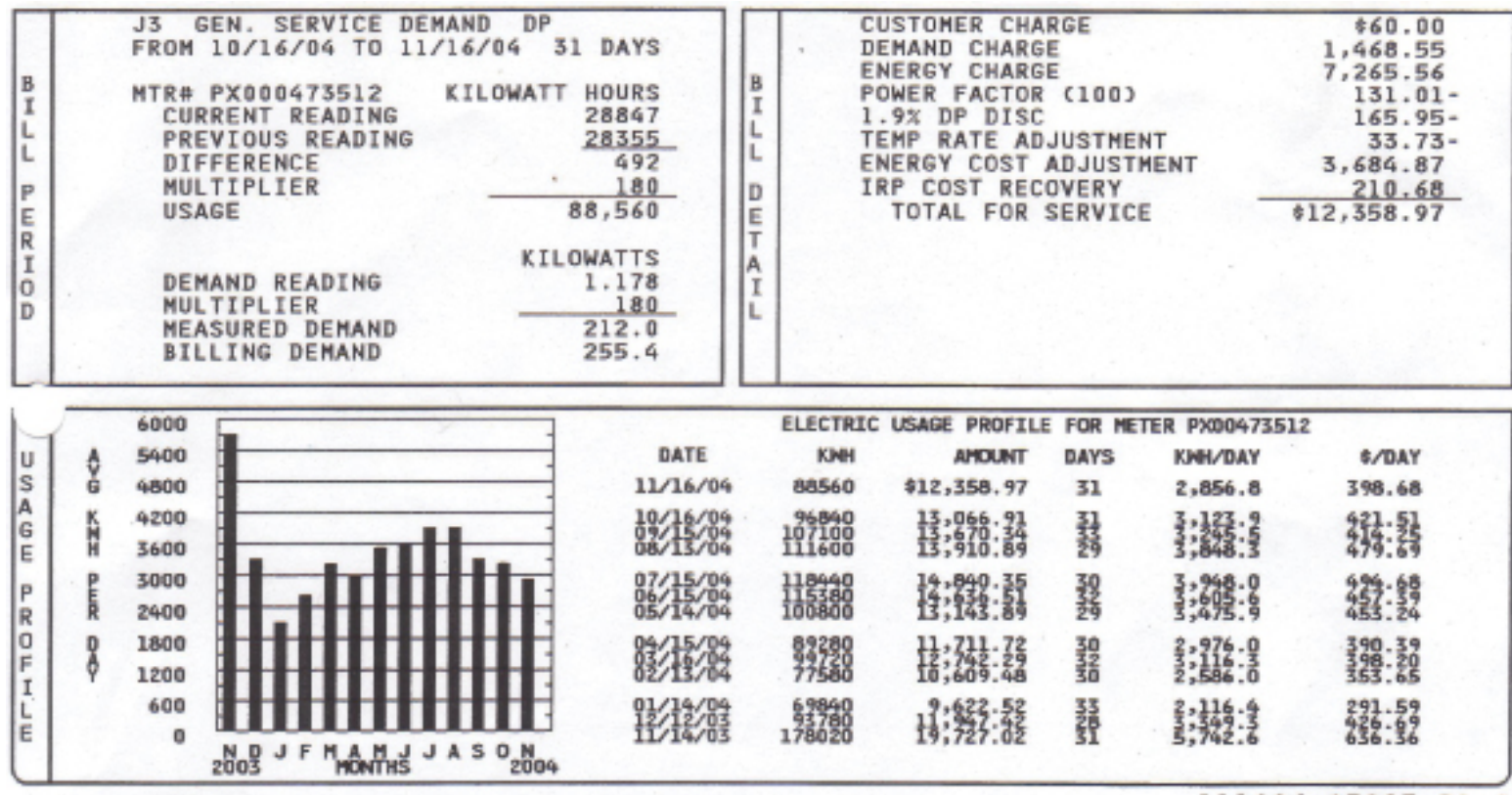


The HECO-required interconnect relay (Beckwith 3410-A) recorded the following conditions with the ElectroFlow™ equipment turned **ON**.

- current **imbalance of 0.00%** across the phases (304-A, 304-B, 304-C)
- 111.82 kW demand (**17.6% reduction**), sending 18.76 kVARs to the grid
- **power factor of 1.01** (leading)
- measurements taken at 3:27 pm, Thursday 3 February 2005



HECO Billing for Pohai Nani, October 16th through November 16th, 2004

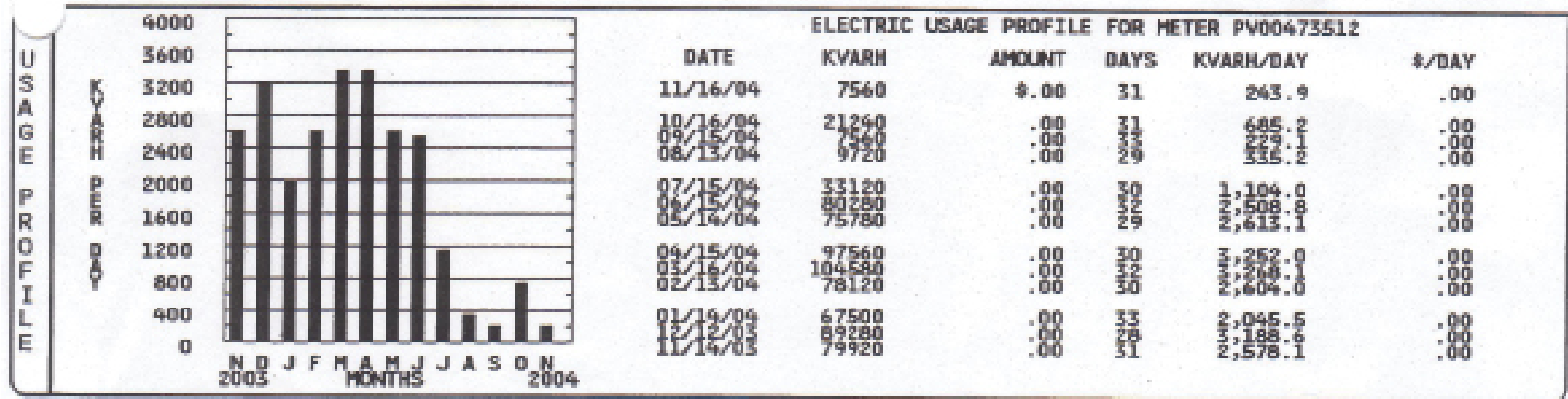


Previous daily kWh usage for this time of year averaged in excess of 4,000; kWh usage for 2004 with ElectroFlow™ installed averaged 2,856 kWh/day

Power factor of 1.00 achieved

Prior measured demand has never been below 242; now at 212

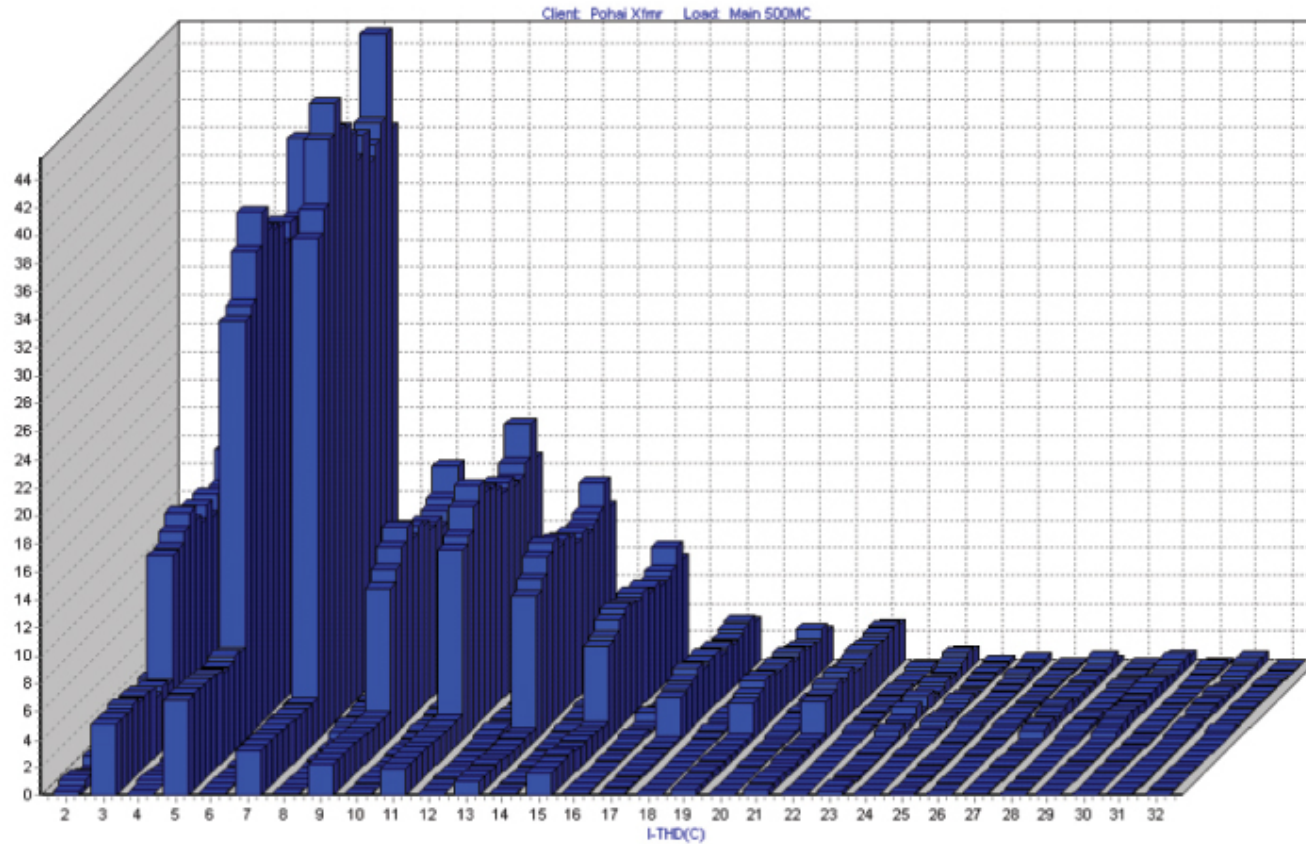
HECO Billing for Pohai Nani, October 16th through November 16th, 2004



Power factor of 1.00 maintained through active harmonic filtering that recycles out-of-frequency energy into usable power, in-balance and in-phase

Significant decrease in kVAR requirements have been achieved by the installation of ElectroFlow™. Beginning with the first full month of ElectroFlow™ operation in August 2004, daily kVAR requirements average only 373; this compares to the prior daily average of 2,757 kVAR (November 2003 – June 2004), or a decrease of over 86%

Measured Harmonic Reduction at Pohai Nani due to ElectroFlow™



Graphical representation of increase in C Phase harmonics upon disabling ElectroFlow™ equipment. Low bars in the foreground are low harmonics with ElectroFlow™ active; significantly increased harmonic distortion is seen when the equipment is disabled.